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MONEY AND EDUCATION

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A GUIDE TO CONNECTICUT SCHOOL FINANCE

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MONEY AND EDUCATION

A GUIDE TO CONNECTICUT SCHOOL FINANCE

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FOREWORD

This publication is the result of a National Institute of Education grant to the American Federation of Teachers.

A "Guide to Connecticut School Finance" is one of a series of handbooks prepared for use at workshops designed to assist teachers, administrators, legislators and other interested parties in understanding and dealing with the intricacies of school finance equalization plans in their states. In the past, these issues have been debated in relative isolation by a handful of experts.

States were selected for analysis either because they are currently undergoing significant changes in their education finance systems or because current within state disparities suggest that the development of new finance legislation is a topic of growing concern. Workshops have been conducted in California, Connecticut, Florida, Illinois, Michigan, Missouri, Ohio, New York, Pennsylvania, Rhode Island and Texas.

It is our hope that through the disseminaton of these handbooks, to a wider audience, people representing diverse points of view will be able to effectively take part in the debates and decisions affecting the financing of our nation's schools.

Lauren Weisberg
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ACKNOWLEDGMENTS

The AFT Project on Teachers and School Finance Reform is the product of the foresight of AFT leadership, and a grant from the National Institute of Education, Department of Education. Recent events--court challenges to school finance plans, declining enrollments, rising education costs spurred by inflation and increased mandatory programming, and shrinking revenues resulting from tax limitation initiatives--have made school finance a critical educational issue affecting every teacher, every parent and every child in the nation's public schools. Each year, state and local governments spend billions of dollars on education. Yet, the decisions regarding how educational revenues are to be raised and more importantly how revenues are to be distributed among schools have been left to the few legislators, administrators, and policymakers who understand the complexities of school finance.

The American Federation of Teachers has long been a leader at the national, state and local levels in the struggle for more money for our public schools. The AFT recognizes that to be successful in maintaining quality public education requires the informed participation of teachers, administrators, parents and the general public in key policy decision-making.

The manual on Connecticut School Finance represents one of many initiatives by the American Federation of Teachers to provide its members and other public interest leaders with the basic knowledge and skills to deal effectively with the issues surrounding the financing of our public schools. The authors hope you will use this manual as a guide to understanding the Connecticut school finance plan and as a resource for exploring future policy issues in Connecticut school finance.

The authors gratefully acknowledge the invaluable assistance of Helen Nemorin of the AFT Economic Research staff for typing the manuscript and preparing it for publication and the imaginative talents of Charles Glendinning for the cover design.

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CHAPTER I

INTRODUCTION

School finance is the most basic educational issue, for without proper financing our system of public education cannot survive. Under the American federal system, the responsibility of providing for elementary and secondary education is reserved for the states. Traditionally, most states have delegated the largest part of this responsibility to local government units, leaving them also with the largest share of financial responsibility for public schools. Since the nineteenth century, local property taxes have served as the major source of revenue for public education. Unequal abilities to support public services and different ideas on what constitutes appropriate local tax effort and spending levels have created wide disparities in educational expenditures per pupil among local school districts in almost all states. It is the existence of these wide disparities in educational expenditures which has been the prime factor behind the recent school finance reform movement.

The school finance reform movement marked its beginning with the landmark case of Serrano vs. Priest in California in the early 1970's. The California Supreme Court ruled that the state's public school financing system "with its substantial dependence on local property taxes and resultant wide disparities in school revenue"[1] was in violation of the equal protection clause of both the California state constitution and the Fourtheenth Amendment of the U.S. Constitution. Central to the Court's decision was its finding that equal educational opportunity was being denied the young people of California because under the state's school finance plan the quality of a child's education, as evidenced by per pupil expenditures, was directly dependent upon the wealth of the child's parents and neighbors. Furthermore, the state's distribution of aid to districts on a uniform per pupil basis, regardless of district wealth, only exacerbated the existing disparities in school district educational offerings. The court also found that taxpayers in poor districts could not "freely choose to tax (themselves) into an excellence" which their tax rolls could not provide.[2] In its ruling, the court raised two fundamental issues: educational expenditure equity and tax burden equity. However, the overriding

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[1] Serrano vs. Priest, 96 Col. Rptr. 601, 487 p. 2d 1241 (1971).

[2] Serrano vs. Priest.

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concern of the court lay with achieving greater equity among school districts in spending for education.

Shortly after the original Serrano case (1971), a federal District Court in Texas found the Texas' system of school finance to be unconstitutional under the Fourteenth Amendment. On appeal, the Rodriguez vs. San Antonio case was heard by the U.S. Supreme Court. In 1973, the Supreme Court reversed the lower court's decision, finding that 1) education was not a fundamental interest afforded protection under the Federal Constitution (Fourteenth Amendment) and 2) there was no suspect classification of poor against whom discrimination had been practiced. The court maintained that the Texas school finance plan was structured so as to preserve local autonomy over education and not to promote wealth discrimination. Paramount to the Court's decision was a fear that a national mandate to reform state school finance laws would cause too great a shift in the traditional distribution of powers among state and federal governments in the field of education.[3]

The impact of the Rodriguez decision was to effectively close the federal courts to any consideration of school finance reform. At the time of the decision, many reformers felt that the weight of such an opinion from the U.S. Supreme Court would negatively influence state courts. Fortunately, the Serrano case remained unaffected by the U.S. Supreme Court's decision since it also was based on an interpretation of the state constitution's equal protection clause. Despite the Rodriguez decision, litigation based on state constitutional grounds did continue in various states.

Within a matter of weeks after the Rodriguez decision, the New Jersey Supreme Court ruled in Robinson vs. Cahill that New Jersey's plan for public school financing violated that state's constitution because the plan failed to provide for a "thorough and efficient system of free public schools." The court stated that the obligation to provide for a "thorough and efficient system" of education was clearly the state's, and that regardless of the reason, "if the local government cannot carry the burden, the state must itself meet its continuing obligation."[4] It is interesting to note in this case that the

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[3] John Jennings, "School Finance Reform: The Challenge Facing Connecticut," Journal of Education Finance, Vol. 4, No. 4, p. 397.

[4] Robinson vs. Cahill, 62NJ 473, 303 A. 2d 273 (1973).

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New Jersey Supreme Court clearly accepted educational expenditure levels as a measure of the quality of educational opportunity being provided in school districts.

The Horton vs. Meskill case followed in 1977. The Connecticut School finance plan was ruled unconstitutional by the Connecticut Supreme Court on grounds that it violated both an education rights clause and the equal protection clause of the state constitution. The court maintained that since it was the state's constitutional responsibility to "provide a substantially equal educational opportunity" for its youth, a system of school finance which relied primarily on local funding and yet provided no significant state equalizing aid was unconstitutional. The court further found that since public education was a fundamental right under the state constitution's equal protection provision, any infringement of that right must be strictly scrutinized. Unlike the U.S. Supreme Court's finding in Rodriguez, the Connecticut Supreme Court held that local control of education was not a "compelling state interest" justifying different treatment for education among districts.

In Cincinnati vs. Walter, an Ohio Supreme Court ruled (1979) that Ohio's school finance plan was constitutional, overturning the decision of two lower courts which ruled in 1977 and in 1978 that Ohio's equal yield formula was unconstitutional. The lower courts held that Ohio's school finance plan, which distributed state aid according to local tax effort, violated the state's "thorough and efficient" education clause since local effort, or the inclination of taxpayers to support property tax initiatives, was not necessarily a reflection of voter preference for education but rather an indicator of the socioeconomic class or wealth of the district. Furthermore, the differences in district expenditures per pupil and resultant variations in educational quality attributed to the school finance plan, violated the state constitution's equal protection clause.

In its findings, the Ohio Supreme Court said the state's plan was constitutional because local control of education "provides a rational basis for supporting the disparity in per pupil expenditures." Additionally, the present financing system meets the condition for a "thorough and efficient" education because "no part or any number" of the school districts in the state are starved for funds or lack of teachers, building or equipment. "The fact that a better financing system could be devised which would be more efficient or

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more thorough is not material," the court said. The case is now being appealed by the plaintiffs to the U.S. Supreme Court.

In the 1978 New York case, Levittown vs. Nyquist, the New York School finance plan was declared unconstitutional. In its findings, the court adopted the concepts of "municipal overburden" and "educational overburden." In recognizing the role of municipal overburden, the court required that the greater burden placed on city taxes to provide revenues for widespread social services must be taken into account in apportioning state funds for public education. Similarly, the court recognized that certain school districts, particularly large urban districts, are overly burdened with high educational need children such as handicapped, disadvantaged, and limited English speaking children. This fact coupled with the higher cost of purchasing educational services in the cities leads to the limited ability of some districts to meet the demand for educational services.

Since Serrano vs. Priest, more than thirty school finance cases have been filed in state and federal courts.[5] Some of the most significant cases have been presented here as a brief overview of the judicial history of the reform movement. While the turmoil of school finance reform may not reach directly into the classroom the impact of the movement will have an effect on the funds available for the education of each and every child. For this reason it is imperative that teachers, other school professionals, and those concerned about public education become knowledgeable about school finance issues and actively engage in policy debates.

The purpose of this manual is to provide an overview of the way public elementary and secondary schools are financed in Connecticut, place school finance in the context of government finances, and explore some of the school finance policy issues and options. Chapter II of this manual looks at state and local government fiscal structures in Connecticut with emphasis on fiscal performance and effort. This chapter is offered as background information for the larger discussion of school finance strategies, for without an understanding of local and state financial capacities, meaningful and well integrated reform measures cannot be conceived. Chapter III explains the current Connecticut

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[5] Jay Moskowitz and Joel Sherman, "School Finance Litigation: The Use of Data Analysis," Journal of Education Finance, 1979. Vol. 4, No. 4, p. 322.

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state school financing plan with emphasis on how state aid to school districts is distributed. Lastly, Chapter IV provides an introduction to the issues surrounding school finance reform by examining statewide disparities in school district educational expenditures, wealth, and tax rates. Some commentary is offered on the effects of these disparities and their relationship to state financing formulas.

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CHAPTER II
CONNECTICUT STATE AND LOCAL FISCAL STRUCTURE

Connecticut is a highly urbanized, densely populated state in the New England area with an estimated population of approximately 3.2 million. Numerous geographic and sociological studies have shown Connecticut to be oriented in two separate directions: part oriented toward New York City and part toward Boston. Fan sentiment during a critical baseball series between the New York Yankees and the Boston Red Sox will clearly demonstrate this. This has made Connecticut a state which has had some difficulty achieving political cohesiveness. There are still remnants of past political battles between Yankee Republicans and ethnic Democrats.

In spite of the existence of a number of predominately rural areas from the Litchfield Hills to some areas near the Long Island Sound, Connecticut is a highly urbanized state with 88 percent of its population residing in metropolitan areas. The urban nature of the state is clearly evident when one considers that 37 percent of the population lives in the two largest metropolitan areas and 65 percent in the five largest. The ten largest metropolitan areas, with their populations, are:

Hartford	735,000	Stamford	205,000
New Haven-West Haven	415,000	New Britain	150,000
Bridgeport	395,000	Danbury	130,000
New London-Norwich	255,000	Norwalk	130,000
Waterbury	230,000	Bristol	75,000

These metropolitan areas seem to be concentrated largely in the central and southwestern parts of the state.

In 1972, there were 428 local governmental units in Connecticut. These included:

34 municipalities
149 townships
231 special districts
14 independent school districts

In all, there were 169 public school systems, with most being part of the township governments.

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In fiscal year 1977, state and local governments in Connecticut made direct general expenditures of almost $3.6 billion (Tables 2 and 4). Approximately 54 percent of this was spent by local governments.

The source of state revenues is shown in Table 1 for fiscal year 1977 The largest individual revenue producers for the state were the general sales tax (25.1 percent of state general revenue), federal aid (23.3 percent), and selective sales taxes (20.2 percent). While Connecticut does not have a general individual income tax, the $59.3 million in revenue listed for the individual income tax is derived from the state tax on capital gains and dividends for individuals. The corporation net income tax provided another 8.7 percent of state revenues, while current charges (e.g. state college and university tuition, highway and bridge tolls, airport fees) brought in 7.7 percent. As a result of the heavy dependence on sales taxation, the Connecticut state tax structure is quite regressive.

TABLE 1

STATE OF CONNECTICUT
GENERAL REVENUE, BY SOURCE
FISCAL YEAR 1977
(million of dollars)

	AMOUNT	PERCENTAGE DISTRIBUTION
Total General Revenue	2327.0	100.0%
Federal Aid	541.3	23.3
Payments from Local Governments	2.9	0.1
General Sales Taxes	583.5	25.1
Selective Sales Taxes	469.5	20.2
License Taxes	94.1	4.0
Individual Income Taxes	59.3	2.5
Corporation Income Taxes	201.7	8.7
Death and Gift Taxes	49.0	2.1
Current Charges	179.8	7.7
Miscellaneous General Revenues	146.9	6.3

Source: AFT Department of Research calculations from U.S. Bureau of the Census, State Government Finances in 1977 (Series GF77 No. 3).

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TABLE 2

STATE OF CONNECTICUT
GENERAL EXPENDITURES, BY OBJECT
FISCAL YEAR 1977
(millions of dollars)

	AMOUNT	PERCENTAGE DISTRIBUTION
Total General Expenditure	2139.4	100.0%
Payments to Local Governments	532.4	24.9
Direct Expenditures	1607.0	75.1
Higher Education	209.2	9.8
Other Education	92.9	4.3
Highways	155.2	7.3
Public Welfare	400.2	18.7
Health and Hospitals	186.5	8.7
Police Protection	25.1	1.2
General Government	72.9	3.4
Interest on General Debt	160.9	7.5
All Other Expenditures	304.1	14.2

Source: AFT Department of Research calculations from U.S. Bureau of the Census, State Government Finances in 1977 (Series GF77, No. 3), and Governmental Finances in 1976-77 (Series GF77, No. 5).

Table 2 shows how the state of Connecticut spent those revenues in fiscal year 1977. The largest single expenditure category was state payments to local governments, which totalled $532.4 million, or 24.9 percent of total state general expenditures. Of the remaining state general expenditures, the largest categories were public welfare (18.7 percent), higher education (9.8 percent), health and hospitals (8.7 percent), interest on the general state debt (7.5 percent), and highways (7.3 percent).

In fiscal year 1977, all local governments in Connecticut raised just over $2 billion in general revenue. As shown in Table 3, the largest source of local revenue was the local property tax, which provided 62.5 percent of the total. In addition, state aid accounted for 19.4 percent, federal aid for 8.2 percent,

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and charges and miscellaneous revenues for 9.2 percent. This heavy dependence on the local property tax places a heavy burden on Connecticut property owners when inflationary pressures are pushing up local government expenditures.

It should be noted that the discrepancy between Tables 2 and 3 in the state aid to local governments results from federal "pass through" aid being counted in the state expenditures tables as state aid. In Table 3, these funds are assigned to their point of origin so that federal monies passed through the state treasury are listed as federal aid.

Table 4 shows the local government expenditures, by category, for fiscal year 1977. Local schools represented one-half (50.4 percent) of all local expenditures. Next in importance were sanitation and sewerage (7.0 percent), police protection (5.8 percent), highways (4.5 percent), fire protection (4.2 percent), interest on general debt (3.7 percent), and general governmental functions (3.2 percent).

TABLE 3

CONNECTICUT LOCAL GOVERNMENTS
GENERAL REVENUE, BY SOURCE
FISCAL YEAR 1977
(millions of dollars)

	AMOUNT	PERCENTAGE DISTRIBUTION
Total General Revenue	2050.0	100.0%
from Federal Government	168.8	8.2
from State Government	398.3	19.4
Total Taxes	1293.8	63.1
Property Taxes	1282.1	62.5
Other Taxes	11.7	0.6
Charges and Miscellaneous Revenues	189.2	9.2

Source: AFT Department of Research calculations from U.S. Bureau of the Census, Governmental Finances in 1976-77 (Series GF77, No. 5).

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TABLE 4

CONNECTICUT LOCAL GOVERNMENTS
GENERAL EXPENDITURES, BY OBJECT
FISCAL YEAR 1977
(millions of dollars)

	AMOUNT	PERCENTAGE DISTRIBUTION
Total General Expenditures	1972.3	100.0%
Local Schools	993.9	50.4
Highways	89.3	4.5
Public Welfare	37.3	1.9
Health and Hospitals	35.5	1.8
Police Protection	115.3	5.8
Fire Protection	83.1	4.2
Sanitation and Sewerage	137.3	7.0
Local Parks and Recreation	40.5	2.1
General Government	62.4	3.2
Interest on General Debt	73.5	3.7
All Other Expenditures	304.1	15.4

Source: AFT Department of Research calculations from U.S. Bureau of the Census, Governmental Finances in 1976-77 (Series GF77, No. 5).

To make financial data more meaningful it is sometimes helpful to develop different kinds of comparisons. Since some states are wealthier than others, it is valid to compare fiscal effort with fiscal capacity. Table 5 shows selected fiscal data related to state personal income for the United States, Connecticut, and three surrounding states.

General revenue raised per $1000 in personal income in Connecticut is 17 percent below the U.S. average and considerably below the three neighboring states of Massachusetts, Rhode Island, and New York. A similar situation exists for revenue from own sources (eliminating federal revenues), and total state and local taxes. However, Connecticut's property tax burden per $1000 of personal income is 22 percent above the national average and exceeds the burden in Rhode Island. New York and Massachusetts have a greater property tax effort

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when compared to capacity.

Likewise, if one looks at direct general expenditures for state and local governments, Connecticut spends 22 percent less than the national average when capacity is equalized and spends less than the surrounding states. Of particular interest is the fact that Connecticut only spends $43 per $1000 of personal income on local schools, while the U.S. average is $52; Massachusetts spends $55, Rhode Island $48, and New York $57. The conclusion is clear: Connecticut is making a very poor effort in supporting public elementary and secondary education. Note also that Connecticut's effort is also very low in support for other public education, which is largely public higher education.

Another way of looking at state and local tax effort is the representative tax system approach. Under this approach, a national average tax rate for each tax is computed and then applied to the tax base of a given state. The subsequent potential yield is then compared to the actual yield resulting in an index of effort. An effort index below 100 shows underuse of a tax and an effort index in excess of 100 indicates overuse.

TABLE 5

RELATION OF STATE AND LOCAL GOVERNMENT
FINANCIAL ITEMS TO STATE PERSONAL INCOME
CONNECTICUT AND SURROUNDING STATES
FISCAL YEAR 1977

	U.S. AVG.	CONN.	MASS.	RI	NY
General Revenue Per $1000 of Personal Income					
Total	$208	$173	$227	$215	$269
from Own Sources	163	142	177	157	217
from Taxes	128	120	151	126	177
from Property Taxes	46	56	74	52	63
Direct General Expenditures Per $1000 of Personal Income					
Total	$199	$156	$208	$205	$253
for Local Schools	52	43	55	48	57
for Other Education	23	13	13	24	19

Source: AFT Department of Research calculations from U.S. Bureau of the Census, Governmental Finances in 1976-77 (Series GF77, No. 5).

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Table 6 shows the index of tax effort under a representative tax system approach for Connecticut for 1975.

Connecticut underuses slightly its total state and local tax capacity, as an effort index of 95 indicates. The general sales tax is overused slightly. The lack of a general individual income tax places a heavy burden on state selective sales taxes (effort index = 140) and local property taxes (effort index = 118). Farm property in particular is heavily taxed. Licenses in general are underused, but effort is very high for motor vehicle operator licenses and alcoholic beverage licenses.

Estimates by the AFT Research Department indicate that if Connecticut levied a general individual income tax at a national average rate, an additional $525-550 million in revenue would be raised for the state in 1979. This revenue, for instance, could allow Connecticut local governments to lower property tax rates to the national average rates, at a total 1979 cost of approximately $225 million, and still leave over $300 million in additional revenue. If this additional money were allocated for local schools, it could increase total funds spent on public elementary and secondary education by roughly 25 percent. Given the fiscal capacity of the state, as evidenced by its high personal income per capita, this would still not impose an undue burden on Connecticut taxpayers. It would provide property tax relief and make Connecticut's state and local tax structure more progressive.

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TABLE 6

CONNECTICUT STATE AND LOCAL TAX EFFORT
UNDER A REPRESENTATIVE TAX SYSTEM APPROACH
1975

TAX	INDEX OF TAX EFFORT
All State and Local Taxes	95
General Sales Tax	106
Selective Sales Taxes	140
Motor Fuels	130
Alcoholic Beverages	69
Tobacco Products	169
Insurance	141
Public Utilities	171
Amusement	1,356
Licenses	69
Motor Vehicle	77
Motor Vehicle Operator	221
Corporations	5
Alcoholic Beverages	166
Hunting and Fishing	54
Individual Income Tax	3
Corporation Net Income Tax	102
Property Tax	118
Residential	116
Commerical and Industrial	120
Farm	134
Public Utilities	127
Death and Gift Taxes	126
Severance Tax	0

Source: D. Kent Halstead, Tax Wealth in Fifty States. (Washington: National Institute of Education, 1978).

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CHAPTER III

STATE SUPPORT FOR PUBLIC ELEMENTARY AND SECONDARY EDUCATION

Public Education in Connecticut

There are 169 school districts or towns in Connecticut operating 1,101 public schools. The districts range from large urban districts, Hartford, Bridgeport, New Haven, Stamford, and Waterbury which are responsible for educating 500 or fewer students. With the exception of Stamford, each of these large urban districts rank among the poorest districts in the state.

Like many states across the country, Connecticut has been experiencing increasing declining enrollments in public schools. Table 7 shows enrollment trends for the period 1965-1977. Since 1972, the schools have seen an average decline of 1.5 percent per year.

Current expenditures for public elementary and secondary education in Connecticut have increased since 1970. Comparing expenditures between 1970 and 1977 in constant 1976-77 dollars, total spending has increased 10.7 percent.[1] In 1976-77, total state and local educational revenues as a percent of personal income was 4.20%, compared to 5.00% for the national average. Per capita income in Connecticut for 1976 was $7,356, well above the national per capita income of $6,399.[2]

Background on Connecticut School Finance

Historically, American public education has been considered a local responsibility with the local property tax serving as the cornerstone of financial support for education. In Connecticut, the local burden of support for education has been significantly greater than the average local burden across the country. In 1975-76, Connecticut local governments financed 63.0 percent of the total expenditures for public elementary and secondary schools,

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[1] The Condition of Education, 1979 edition; National Center for Education Statistics, DHEW; p. 162.

[2] The Condition of Education, 1979 edition, p. 150.

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TABLE 7

PUBLIC SCHOOL ENROLLMENT
IN CONNECTICUT

YEAR	TOTAL CONNECTICUT ENROLLMENT	PERCENT CHANGE OVER PRECEDING YEAR
1965	583,569	+3.5
1966	604,106	+3.1
1967	622,824	+3.3
1968	643,380	+3.3
1969	653,120	+1.5
1970	670,437	+2.7
1971	675,095	+0.7
1972	673,668	-0.2
1973	667,529	-0.9
1974	660,771	-1.0
1975	652,377	-1.3
1976	635,035	-1.3
1977	616,389	-2.9

1965-1971 figures are estimated.

Source: AFT Research Department calculations from data from the Connecticut State Department of Education, Division of Administrative Services, Bureau of Research Planning and Evaluation.

while state expenditures and grants contributed toward 32.4 percent of the total. Federal funds comprised the remaining 4.5 percent. Nationally, during 1975-76, local support for education averaged 47.4 percent, almost 16 percent less than Connecticut's local share. The national averages for state and federal support were 47.4 percent and 8.8 percent respectively. (Table 8).

In 1978, Connecticut spent almost $1.3 billion for public education for 575,000 students. Local property taxes continued to account for about 63 percent of total revenues with state support still averaging 32 percent of the total.[3] Across the country, average percentages for local, state and federal

[3] Equity and Excellence in Education; Connecticut State Board of Education; 1979; p. 3.

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TABLE 8

REVENUE RECEIPTS FROM
FEDERAL, STATE, AND LOCAL SOURCES
FOR PUBLIC ELEMENTARY AND SECONDARY SCHOOLS
1975-76

AREA	TOTAL	FEDERAL		STATE		LOCAL	
		AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL
U.S. Average	$70,802,804	$6,210,343	8.8	$31,065,354	43.9	$33,527,107	47.4
Connecticut	1,122,257	50,824	4.5	364,050	32.4	707,383	63.0

Source: 1977-78 Digest of Education Statistics; National Center for Education Statistics, Dept. Health, Education and Welfare.

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revenues for education remained about the same as 1975-1976.[4]

This heavy reliance on local revenues for education has resulted in wide variations in education expenditures among Connecticut local school districts. Districts with high property wealth are better able to spend large amounts on education at lower than average property tax rates, while towns with low property wealth usually spend less on education despite higher than average tax rates.

As an example, consider the resources of two Connecticut communities, Chaplin and Greenwich. Chaplin has about 400 children enrolled in its public schools. The per capita income of the town at $4,056 is below average for all Connecticut towns. And its tax base at $5,254 adjusted equalized property value per capita is limited with no major corporate headquarters, industries or utilities to strengthen the property base for taxation. To support the cost of education, Chaplin levies a very high tax rate of 41 mills which only yields $839 per pupil for net current expenditures.[5]

In contrast, Greenwich, one of Connecticut's wealthiest towns, has a per capita income of $9,536 and a per capita equalized property base of $49,235. Greenwich levies a tax rate of only 6.6 mills and raises $1,920 per pupil for net current expenditures.[6]

One of the major problems confronting Connecticut school financing has been that the major part of the state's support for public education has been distributed without regard to local wealth. Prior to 1975, state general aid for local education was distributed by means of a flat grant. Regardless of property wealth, each school district received a grant of $250 per pupil in average daily membership (ADM). State categorical aid was distributed similarly, either as a flat dollar amount per eligible pupil (transportation) or a flat percentage of costs (special education, school construction). The result, wealthy towns received the same, or sometimes more, state aid per pupil than poor towns.

In late 1974, the Connecticut Superior Court ruled the state's system of financing public schools unconstitutional as it violated both the education provision and the equal protection clause of the state constitution. On

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[4] The Condition of Education, 1979 edition; National Center for Education 1979; p. 3.

[5] Equity and Excellence in Education; Connecticut State Board of Education; 1979.

[6] Equity and Excellence in Education.

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appeal, the Horton vs. Meskill case was heard by the Connecticut Supreme Court, which finally upheld the Superior Court's decision in April 1977.

The thrust of the Court's findings focused on the inequalities in educational opportunities for students stemming from the heavy reliance on local property taxes. The Court maintained that since it was the state's Constitutional responsibility to "provide a substantially equal educational opportunity for its youth," it was not appropriate for the state to utilize a system of financing public schools which delegated primary financing responsibilities to the local districts and yet provided no significant state equalizing support. Current state aid, in the form of a flat grant, did not compensate for variations in local ability to raise revenues.

The Court further found that education was a "fundamental right" under the State Constitution's equal protection clause, and any infringement of that right must be strictly scrutinized. The Court held that local control of education was not a "compelling state interest" justifying different treatment for education among districts. The Court said the state could develop a financing system which affected both local control of education and equalization of local ability to raise revenue.

In 1975 while litigation was still pending, the state legislature implemented the Guaranteed Tax Base Formula (GTB) as an equalizing state aid program in addition to the flat grant. Under that system, all towns were ranked according to wealth, defined as the product of their equalized property wealth per capita and the ratio of the town's median family income to that of the state. All town's ranked below the 85th percentile in wealth were entitled to state aid. During the first two years of the program, a statewide spending cap limited the GTB aid to a small percentage of the $250 flat grant. The result was that most eligible towns received less than $25 in GTB aid. In the last two years of the program, state appropriations for GTB aid were increased but never to the level of full funding. Thus, the program never really achieved equalization. In 1978-79, full funding of the GTB program alone would have cost over $400 million. Total state aid for that year was $390 million; $150 million in flat grants, $40 million in GTB aid, and $100 million in categorical aid.[7]

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[7] Education Commission of the States Newsletter.

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In response to the 1977 Connecticut Supreme Court ruling in Horton vs. Meskill, the State Board of Education created the School Finance Advisory Panel to study financing alternatives. Based on the Panel's studies, the State Board of Education issued a report in January 1979, recommending a new school finance system using the basic guaranteed tax base approach. The new state aid system, signed into law April 26, 1979, incorporates most of the recommendations of the Board of Education. Due to the high cost of implementing the new state aid formula, provisions have been made to phase the plan in over a 5-year period leading to full funding of state aid entitlements in 1984.

THE GUARANTEED TAX BASE FORMULA

Funds for Connecticut public elementary and secondary schools come from three sources: local revenues, state aid, and federal aid. State aid to public schools is distributed as general aid and other categorical program aid covering special education, transportation, educationally disadvantaged, adult education, and vocational education.

General State Aid

General state aid for school districts is computed using the Connecticut Guaranteed Tax Base Formula (GTB), which is designed to equalize the abilities of school districts or towns (as they are referred to) to raise educational revenues. A basic guaranteed tax base plan assures each district in a state that it can act as if it had a tax base or level of property wealth equal to that of some level or standard set by the state.

Under this type of plan, the local district is free to choose the tax rate it wishes to levy upon its property wealth for the purpose of raising educational revenues. This tax rate is then applied to the state guaranteed tax base and to the actual tax base of the district. State aid is the difference between what could be raised with the guaranteed tax base and what is actually raised by the district from its local property wealth. The basic formula for a guaranteed tax base approach is:

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$$\text{State Aid} = \left(\begin{matrix}\text{Guaranteed}\\ \text{Tax Base}\end{matrix} \times \begin{matrix}\text{Local}\\ \text{Tax Rate}\end{matrix}\right) - \left(\begin{matrix}\text{Local}\\ \text{Tax Base}\end{matrix} \times \begin{matrix}\text{Local}\\ \text{Tax Rate}\end{matrix}\right)$$

Applying this formula, if all districts below the guaranteed tax base levy identical school tax rates, with state aid they will all generate equal revenues to spend on education. The plan guarantees equal yield for equal effort with state aid and total educational spending being directly dependent upon local effort. As you can see the formula does not necessarily ensure the same level of educational expenditures among districts. If District A chooses a lower school tax rate than District B, District A will have less to spend on education than District B.

The Connecticut Guaranteed Tax Base Formula incorporates some modifications over the basic formula (above). The use of a tax base or property wealth in the formula, as an indicator of ability to pay, has been broadened to represent a more sensitive measure of "wealth" which includes personal income in addition to property wealth. This new "wealth" measure more accurately reflects a taxpayer's ability to pay for educational services. The level of wealth guaranteed under the formula has been set by the state as that level corresponding to the ninth wealthiest town in the state. This means any town whose wealth is equal to or less than that of the ninth wealthiest town can receive state aid. The Connecticut formula also introduces an educational "need" factor to compensate for differing expenditure levels which might be required by districts having large populations of disadvantaged students. Combining these factors, a grant under the Connecticut GTB formula is calculated by taking the difference between the wealth of the guarantee town (the 9th wealthiest town) and the local wealth of a town, and multiplying this difference by the local taxing effort times the local student need factor.

$$\text{GTB Aid} = \left(\begin{matrix}\text{Wealth}\\ \text{Guarantee Town}\end{matrix} - \begin{matrix}\text{Wealth}\\ \text{Town}\end{matrix}\right) \times \begin{matrix}\text{Town's Tax}\\ \text{Rate}\end{matrix} \times \text{Town's Need}$$

Wealth

The GTB formula defines wealth as a combination of taxable property value and personal income. In the formula, wealth is termed Adjusted Equalized Net Grand List Per Capita.

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Net grand list is a school district's or town's taxable property wealth. The value used in the GTB formula is that net grand list taxed by the town for local revenues in the fiscal year preceding the grant year. Since state aid is distributed largely based on property wealth, it is necessary to be able to compare towns' net grand lists. To make comparisons, all towns' property values are equalized annually by the State Department of Revenue Services. This process involves adjusting each town's net grand list of real property at fair market value by the town's Sales/Assessment Ratio, a comparison of actual selling prices of real property within a community to assessed values of property. Each town's personal property is also equalized at fair market value by a similar process. The sum of the equalized real and personal property is the Equalized Net Grand List.

The Adjusted Equalized Net Grand List (AENGL) of a town is its equalized property value adjusted by a personal income factor. The AENGL is defined as the town's equalized net grand list multiplied by the ratio of the town's per capita income to the highest per capita income of any Connecticut town.[8] The most current U.S. Census data is used for per capita income figures.

$$\text{Adjusted Equalized Net Grand List} = \text{Equalized Net Grand List} \times \frac{\text{Per Capita Income Town}}{\text{Highest Per Capita Income of a Town}}$$

Finally, the Adjusted Equalized Net Grand List Per Capita (AENGLC) of a town is its Adjusted Equalized Net Grand List divided by the town's total population using the most current federal or state census data. This is the measure of wealth used in the Connecticut GTB formula. Any town whose AENGLC is less than or equal to the AENGLC of the ninth wealthiest town (as ranked in descending order of AENGLC) can receive state general aid.

Dividing a town's effective wealth, AENGL, by the town's population rather than the town's ADM, which is frequently used, creates an interesting definition of wealth for school finance purposes. Considering a town's total population in the formula accounts for a potentially significant segment of the population which because of age or economic status may not really be contributing to the overall wealth of the town but actually taxing the town's resources for social

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[8] "The town at the one hundredth percentile among all towns in the state ranked from lowest to highest in per capita income"; Public Act 79-128, a law concerning education in Connecticut.

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services. Again, Connecticut has chosen variables in its formula which lead to more sensitive measures of district or town wealth.

A sample calculation of AENGLC for a town in Connecticut follows:

Town = "t"

Equalized Net Grand List $_t$ = $30,000,000

Population $_t$ = 1,500

Per Capita Income $_t$ = $6,000

Highest Per Capita Income of a Town = $12,000*

$$AENGLC_t = \frac{\text{Equalized Net Grand List}_t}{\text{Population}_t} \times \frac{\text{Per Capita Income}_t}{\text{Highest Per Capita Income of a Town}}$$

$$= \frac{\$30,000,000}{1,500} \times \frac{\$6,000}{\$12,000}$$

$$= \$20,000 \times .5$$

$$AENGLC = \$10,000$$

EXERCISES ON AENGLC

For the following Connecticut towns, compute the Adjusted Equalized Net Grand List Per Capita (AENGLC). Figures shown are actual data published by the Connecticut State Board of Education for 1979-80. Use $11,404 for the highest town's per capita income.

Town	Canterbury	Goshen	Roxbury
ENGL	56,603,052	67,665,912	70,171,448
Per Capita Income	4,323	5,260	8,010
Population	3,174	1,637	1,368

*Sample figure only. Actual 1974 Highest Per Capita Income for a Connecticut town (U.S. Census data) is $11,404 for Darien.

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Local Effort

Local effort is the tax rate a town levies on its property value to raise educational revenues. Local school boards in Connecticut do not have taxing authorities. Consequently, there are no identifiable school tax rates. Therefore, for the GTB formula, the effective school tax rate has been defined as the town's net current local educational expenditures (for the fiscal year two years prior to the current grant year) divided by the town's AENGLC. Net current local educational expenditures are current local expenditures, including transportation costs, minus state and federal aid.

The result of dividing a town's net current local educational expenditures by its AENGLC is an effective tax rate expressed in mills. A mill is a tax rate of $1 for every $1000 of assessed property valuation. A 20 mill tax rate on $10,000 of property value yields $200:

$$\$20 \times \frac{\$10,000}{\$\ 1,000} = \$20 \times 10 \text{ or } .020 \times \$10,000 = \$200$$

Educational Need

Student or educational need is factored into the GTB formula to provide additional revenue to school districts with high concentrations of disadvantaged students, recognizing the increased costs associated with providing specially targeted educational services. Student need is defined as the total student population which equals the total number of students in average daily membership (ADM) for the preceding school year plus ½ the number of children, ages 5 to 18, from families receiving Aid to Families with Dependent Children (AFDC). ADM reflects the average daily enrollment, as opposed to average attendance. This method of counting students particularly benefits districts with high absenteeism, like rural districts, which are forced to provide textbooks, desks and other costly supplies for all students who are enrolled in school regardless of their attendance.

The Connecticut GTB Formula

State aid under the GTB formula is found by combining the above three factors: wealth, effort, and need. The amount of GTB equalization aid a town receives is equal to the product of: 1) the difference between the adjusted equalized net grand list per capita (AENGLC) of the ninth wealthiest town and the AENGLC for the local town and 2) the school tax rate, times 3)

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student need (ADM + ½ AFDC). The formula for state aid is:

$$\text{GTB Grant} = \underbrace{\left(\text{AENGLC}_{\text{9th town}} - \text{AENGLC}_{\text{town}}\right)}_{\text{WEALTH}} \times \underbrace{\text{Local Tax Rate}}_{\text{EFFORT}} \times \underbrace{\left(\text{ADM} + \tfrac{1}{2}\,\text{AFDC}\right)}_{\text{NEED}}$$

By looking at the formula, you can see that a town's state aid varies depending upon the local wealth of the town compared to that of the ninth wealthiest town, the town's local school tax effort and the town's student need. If two towns have equal school tax rates and equal student need, they may not necessarily receive the same amount of GTB aid. The town with the lower wealth (AENGLC) will be entitled to receive a larger grant. Similarly, if two towns have equal wealth and equal student need, the town with the greater local school tax effort will be entitled to receive more aid. And finally, if two towns have equal wealth and equal effort, the town with the greater student need, as a result of either more students or more AFDC children, will be entitled to more state aid.

Consider the following example of how to calculate a town's GTB grant, where:

t = Town,

G = Guarantee Town or the 9th wealthiest town

AENGLC_G = $30,000

Our town_t has the following characteristics:

AENGLC_t = $10,000

Tax Rate_t = 20 mills

150 students (ADM) of whom 50 are disadvantaged

The sample calculation of GTB aid follows:

1) Student need = 150 + ½ (50)
= 175

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2) $\text{Total GTB Aid} = (\text{AENGLC}_G - \text{AENGLC}_t) \times \text{Tax Rate}_t \times \text{Student Need}_t$

$= (30{,}000 - 10{,}000) \times (.020) \times (175)$

Total Grant to Town = $70,000

$$\text{GTB Grant Per Pupil} = \frac{\$70{,}000}{150 \text{ pupils}}$$

$= \$467/\text{pupil}$

The GTB formula is a dynamic or fluid formula which means that the factors in the formula are defined such that they can change yearly as district or town variables change. The state guaranteed level of wealth can fluctuate depending upon which town is the ninth wealthiest town in any year which ultimately depends upon changes in local property values, personal income and town population. Similarly a town's state aid can vary significantly depending upon these variables and others like local tax effort and student need.

EXERCISES ON GTB GRANT

Calculate the total GTB grant per pupil for town_t in Example A considering the following changes:

1) an increase in the AENGL_t to $15,000
2) a 50% increase in the school tax rate
3) a 3% decline in total regular enrollments

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Save Harmless

An additional consideration in computing a town's general state aid is a save-harmless provision which stipulates that no town shall receive a grant less than $250 per pupil. This provision benefits the wealthier districts who were guaranteed a $250 per pupil grant under the old state aid formula, but now qualify for little or no state aid under the new GTB formula.

Also, towns with regional K-12 schools receive an additional $25 per pupil in general state aid for each pupil in ADM at the regional school during the preceding school year. The save-harmless provision (above) guarantees these districts at least $275 per pupil in state aid through 1984. A limit has been placed on the amount of additional general state aid such a district can receive. No town can receive additional aid in excess of the town's minimum per pupil expenditure requirement.

EXERCISES ON GTB FORMULA

Compute the total GTB grant and grant per pupil for each of the following towns in Connecticut. The guarantee town is Easton with an AENGLC = $31,334.

Town	Norwalk	Hartford	Darien	Salem
AENGLC	$14,241	$5,672	$48,985	$10,921
Tax Rate (mills)	17.56	47.67	8.65	27.64
ADM	14,293	27,481	4,739	515
AFDC	2,472	20,031	21	2

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Full funding for the new Guaranteed Tax Base Formula represents a tremendous increase in state aid to education. Accordingly, the program is to be phased in over a 5-year period. The law has established a schedule for determining the percentage of full funding of state aid districts are to receive between fiscal year 1980 (FY 80 corresponds closely with academic year 1979-80) and fiscal year 1984 with full funding slated for FY 84. The method for computing actual state aid for this period appears in Appendix A.

Minimum Expenditure Requirement

To be eligible to receive general state aid a town or school district must 1) maintain its schools according to state law; 2) have an adjusted equalized net grand list per capita less than or equal to that of the ninth wealthiest town; and 3) meet the minimum per pupil expenditure required by law. The minimum expenditure requirement (MER) was created to ensure a leveling up of expenditures per pupil in towns at the low end of the spending scale. It also ensures that some of the new GTB aid will go toward increased services to students instead of tax relief. The MER is based on the state median per pupil expenditure for the fiscal year two years prior to the grant year. This allows the state to develop each town's MER for the preceding school year in time for budget preparations. The formula for calculating MER is:

$$\text{MER Per Pupil}_t = \text{State Median Per Pupil Expenditure}^* + \frac{\text{State Median } \tfrac{1}{2} \text{ Per Pupil Expenditure}^* \times \text{AFDC}}{\text{Total ADM}_t}$$

*for FY 2 years prior to grant year

If a town does not currently meet its minimum required per pupil expenditure, it can refer to a state established schedule for meeting its expenditure goal by FY 1984. No town shall be required to meet its per pupil expenditure if its AENGLC and tax rate are both less than or equal to that of the 85th wealthiest town, provided the town's net current expenditures are no less than its expenditures for the preceding fiscal year.

State Categorical Aid

In addition to the state equalization aid (GTB grant), Connecticut provides categorical aid to encourage school districts to provide programs for specific

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types of children, to provide specific services, and to meet specific management requirements. By contributing to the costs of these programs, the state helps school districts provide services they might not otherwise be able to provide. Among the major categorical aid programs for public education are: special education, grants for educationally disadvantaged students, vocational education, adult education, bilingual education, school lunch, health-welfare services and school construction.

Under the new state aid program, signed into law this past spring, the method of calculating state aid to towns for special education and transportation has been equalized to reflect local ability to pay for these services.

The state's share of these costs will be based on a scale of town wealth according to the new GTB plan's wealth rankings. Grants to towns will be paid on a sliding scale of between 30% and 70% of net total expenditures for special education, and between 20% and 60% of net total expenditures for transportation. Beginning in 1980-81, state aid will be based on current year expenditures rather than the previous year's expenditures. Also, a save harmless provision will maintain the minimum level of state aid at 1978-79 levels.

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CHAPTER IV
STUDYING CONNECTICUT'S SCHOOL FINANCE PLAN

The school finance reform movement of the past decade has resulted largely from court challenges to existing school finance plans on the grounds that they violated equal protection provisions within state constitutions. Connecticut's own school finance plan has resulted from such court action. The courts have held that the quality of education a student receives should not be dependent upon the wealth of the district in which the pupil resides. Central to the discussions of the school finance reform movement are two basic concepts: fiscal equity and educational equity.

While there is some ambiguity among school finance experts as to the precise meaning of these two terms, fiscal equity generally refers to the ability of school districts to raise educational revenues while educational equity refers to the distribution of educational resources or the availability of educational opportunities across districts.

The concept of fiscal equity recognizes that due to varying degrees of local wealth, school districts have varying abilities to raise educational revenues. Typically, since most local revenues for education are raised through a local property tax, district wealth is defined as equalized property value per pupil. Recall that the Connecticut school finance formula defines wealth as a factor of equalized property value and personal income. This adds a dimension to wealth which some economists claim is a more accurate measure of ability to pay for services since all taxes, regardless of the property tax base, are paid out of income. By equalizing the abilities of school districts to raise educational revenues through comparable effort, fiscal equity or fiscal neutrality is achieved.

Fiscal equity does not necessarily result in any lessening of the differences in levels of educational services provided, as measured by expenditures per pupil. Fiscal equity only requires that differences in educational services not be a function of wealth. However, differences in educational expenditure levels may result from the desire of some districts to offer a higher level of educational services through higher property tax rates.

Educational equity refers to the level or quality of educational services

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provided students across school districts. It is commonly measured in terms of expenditures per pupil. While expenditures do not accurately measure educational services, a higher expenditure per pupil does suggest the ability, on the part of school districts, to hire additional or more experienced teachers, to offer more innovative instructional materials or educational programs, to expand facilities, etc. Under this concept, differences in per pupil expenditures are allowed as long as they are based on some rational measure of differing student need.

The manner in which equalization is defined and measured, and the criteria used for determining if "equalization" is achieved are important considerations in evaluating the impact of a state school finance plan. A plan may do well toward alleviating one type of disparity without affecting other types of disparities. For example, a plan may equalize per pupil expenditures among school districts, but in the process increase the disparity among districts in the school tax rates they levy. Most often a school finance plan addresses both the needs for equity in the raising of resources and in the distribution of resources.

The Connecticut GTB formula is designed primarily to achieve equity in the raising of educational revenues; however, it also addresses educational equity. The GTB formula guarantees all school districts a tax base or wealth level equal to that of the ninth wealthiest town in the state. In effect Connecticut is guaranteeing all districts levying the same school tax rate equal educational revenues, despite differences in actual wealth. Thus, the amount of revenue available for educational spending within a district is directly dependent upon local effort or the willingness of a district to tax itself.

Toward achieving equity in the distribution of educational revenues, the GTB plan requires that all districts spend a minimum amount per pupil, as prescribed by the state. This ensures at least a comparable level of basic educational services across all districts. Additionally, the GTB formula recognizes, as part of its definition of equity, the principle of different treatment for different needs. By incorporating an educational need or student need factor into the GTB formula, the state can direct more aid to those districts with disadvantaged students. This is especially beneficial to large urban districts with sizeable populations of AFDC children. These districts, whose resources are already sorely stretched by public services, must also bear the

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increased costs associated with providing specially targeted services to disadvantaged students.

This chapter looks at the differences among Connecticut school districts in the distribution of educational resources as measured by per pupil expenditures and in their abilities to raise educational revenues, considering district wealth and school tax rates. The purpose of this chapter is not to judge the equity of the Connecticut plan but to show ways in which the different approaches to equity can be analyzed.

Distribution of Educational Resources

Under the topic of distribution of educational resources, we will consider per pupil expenditures among districts and the GTB student need factor which serves to provide more aid to districts with disadvantaged students. The data on educational expenditures is taken from 1977-78, prior to the adoption of the new GTB formula. A guaranteed tax base plan was in effect during this period, but as it was not being fully funded the equalizing effect could not be really achieved. As such, wide differences in spending among districts may be attributed to a disequalizing state aid plan. In the years ahead, educational spending patterns among districts should be analyzed under the new GTB plan to determine how successful the new formula is.

To investigate the possible disparities in district educational expenditures we have developed a small, working sample of 20 Connecticut school districts. Table 9 shows the per pupil expenditures (net current expenditures) of these districts arranged in order from the district with the highest per pupil expenditure to the district with the lowest per pupil expenditure. The data is for net current expenditures which include all current operating expenditures except transportation, capital outlay, and debt service.

A quick examination of the data shows the wide differences in per pupil expenditures among districts for 1977-78. However, in order to analyze the degree of disparity, it is useful to employ certain statistical techniques which help to summarize the data. For the purpose of our discussion, we will use some of the basic techniques. Keep in mind there are more sophisticated statistical techniques which can be used to yield more comprehensive analyses.

The simplest summary technique is the range, the difference between the highest and lowest value. The range indicates the extremes or how widely

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TABLE 9

NET CURRENT EXPENDITURES
PER PUPIL 1977-78
SAMPLE OF 20 CONNECTICUT DISTRICTS

DISTRICT	TOTAL NET CURRENT EXPENDITURES[1]	ADM	NET CURRENT EXPENDITURES PER PUPIL
New Canaan	$ 9,506,008	4,162	$ 2,284
Hartford	57,710,100	27,481	2,100
Wilton	8,449,548	4,146	2,038
Wethersfield	9,126,467	4,811	1,897
Norwalk	26,827,961	14,293	1,877
New Haven	36,112,080	20,040	1,802
Chester	1,094,373	609	1,797
Danbury	18,884,856	10,562	1,788
Essex	1,525,944	879	1,736
Suffield	3,445,204	1,988	1,733
Windsor	8,484,489	4,953	1,713
Bolton	1,349,220	796	1,695
Andover	842,184	504	1,671
Middletown	9,903,846	5,934	1,669
Groton	12,959,759	7,793	1,663
Glastonbury	6,684,992	5,596	1,552
Bristol	15,543,288	10,617	1,464
Ansonia	4,306,176	3,024	1,424
Salem	634,995	515	1,233
Union	119,288	104	1,147
TOTAL	$233,510,778	128,807	$34,283

[1]Represents current operating expenses excluding transportation, capital outlay and debt service. These figures have been computed based on actual data for ADM and Net Current Expenditures per ADM.

[2]In Connecticut, per pupil refers to per ADM.

Source: AFT Research Department calculations from data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

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dispersed the districts are. In looking at how widespread the difference is between the highest and lowest values, it is important to keep in mind the relative size of the sample. For our sample, the range is the difference between the per pupil expenditures for New Canaan (the highest value) and Union (the lowest value):

$$\$2284 - \$1147 = \$1137 \quad \text{Range}$$

Given there are only 20 districts in our sample, the range is quite high.

Another way to look at the range is to examine the ratio between the highest value and the lowest value. The range ratio for our sample is 1.99 to 1 or 2 to 1:

$$\frac{\$2284}{\$1147} = \frac{1.99}{1} \text{ or } 1.99{:}1 \quad \text{Range Ratio}$$

The range ratio shows that New Canaan spends almost twice as much on education per pupil as does Union. The range and range ratio are also used to show how closely the summary measures of central tendency represent the entire sample.

The measures of central tendency are the simple mean, the weighted mean, and the median. They are so called because they describe some central point or value in the data. These measures are used to describe differences by comparing their values with the actual values of individual districts in the sample. For example, you may indicate how much a particular district varies from the average, or you may choose to group the districts by degree of variance from the average.

The simple mean, or arithmetic average, is the most familiar method of summarizing data. The mean or average per pupil expenditure in our sample is $1,714. This is found by dividing the sum of all districts' per pupil expenditures by 20, the number of districts in the sample.

$$\frac{\$34,283}{20} = \$1,714 \quad \text{Simple Mean}$$

As a measure of central tendency, the simple mean can be misleading if there are wide differences in the number of pupils among districts. In computing the simple mean, we placed equal weight on each of the values for per pupil expenditures, which themselves represent "averages" of total expenditures per total ADM. Thus, some distortion results from counting a per pupil expenditure of $1,802 for New Haven with an ADM of 20,040 the same as a per pupil expenditure of $1,797 for Chester with an ADM of 609.

This problem can be overcome by calculating a weighted mean or weighted

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average which does account for the differences among districts in pupils. The weighted average is found by dividing the total net current expenditures for all districts by the total ADM for all districts:

$$\frac{\$233,510,778}{128,807} = \$1,813 \qquad \text{Weighted Mean}$$

The median is the middle value when you arrange the values according to size. The per pupil expenditures in Table 9 have been arranged by size from the highest per pupil expenditure to the lowest. The median is the per pupil expenditure that lies halfway between the district with the highest value and the district with the lowest value. As an example, in a distribution with an odd number of values, say 5, the median is the middle or third value (1 2 3 4 5). In our sample of 20 districts, the median is the value which divides the 20 districts into 2 equal parts. Thus, it lies midway between the 10th and 11th values or between $1,733 (Suffield) and $1,713 (Windsor). The median is computed as follows:

(1) $\frac{\$1,733 - \$1,713}{2} = \frac{20}{2} = 10$

(2) $\$1,713 + 10 = \$1,723$ Median

or (3) $\$1,733 - 10 = \$1,723$ Median

A summary of the data on per pupil expenditures for our 20 Connecticut school districts (Table 9) follows:

Range:	$1,137
Range Ratio:	1.99 : 1
Simple Mean:	$1,714
Weighted Mean:	$1,813
Median:	$1,723

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Exercises

1. From Table 9 develop a summary table, like the one on the preceding page, for the following districts:

   Wilton

   Chester

   Windsor

   Groton

   Ansonia

2. Develop a summary table for Hartford, Norwalk, and New Haven. How does it compare to the sample of 20 districts?

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Statewide Per Pupil Expenditure Disparities

The small sample of 20 districts has been used to illustrate how data can be summarized for the purpose of analyzing differences among districts' per pupil expenditures. However, such a small sample cannot be very representative of the entire state.

Table 10 shows summary data for all 169 school districts in Connecticut.

TABLE 10

SUMMARY MEASURES OF PER PUPIL EXPENDITURES
169 CONNECTICUT SCHOOL DISTRICTS

Highest Spending District (West Hartford)	$2,488
Lowest Spending District (Griswold)	$1,014
Range	$1,474
Range Ratio	2.45 to 1
Simple Mean	$1,570
Median (Glastonbury)	$1,552

As expected, since this sample is larger than the sample of 20 districts, the extreme values are greater, yielding a higher range and range ratio. In Connecticut the highest spending district spends two and one half times more on education per pupil than does the lowest spending district in 1977-78.

Another way of analyzing disparities is to look at the distribution of per pupil expenditures within the larger sample. Table 11 shows 1) the number and percentage of school districts that fall within each of six expenditure ranges; and 2) the total ADM served by the districts in each spending range; 30.2 percent of the districts and 29 percent of the ADM lie within the middle range $1400-1600. Clearly, more than 28 percent of the districts spend less than the average amount of $1,570 per pupil on educational services. This suggests that more than 19 percent of the ADM are receiving a less than average level of educational service.

Another way to show these differences is to present the information in Table 11 graphically. Figure 1 does this using a bar graph. You can see from the graph that the greatest percentage of districts lie within the middle range, $1401-1600.

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TABLE 11

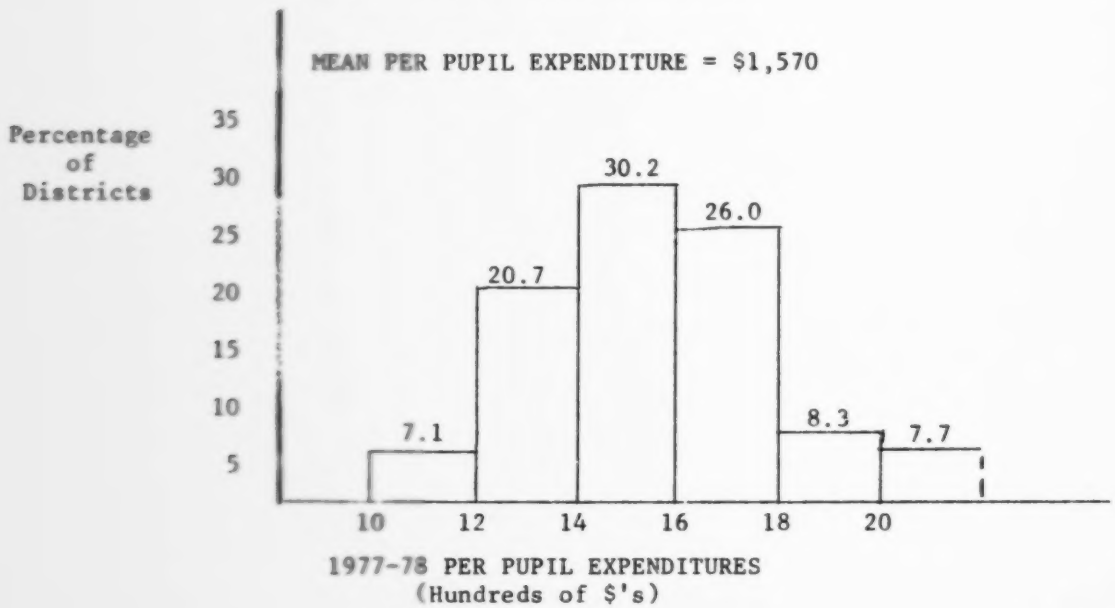
DISTRIBUTION OF PER PUPIL EXPENDITURES FOR 1977-78
169 CONNECTICUT SCHOOL DISTRICTS

1977-78 Per Pupil[1] Expenditures	Number of Districts	Percentage of Districts	Number of ADM	Percentage of ADM
$1,000-1,200	12	7.1	15,560	2.6
1,201-1,400	35	20.7	87,896	14.7
1,401-1,600	51	30.2	173,890	29.0
1,601-1,800	44	26.0	147,853	24.7
1,801-2,000	14	8.3	79,617	13.3
Above 2,000	13	7.7	94,667	15.8
TOTAL	169	100.0	599,483	100.0

[1]Per Pupil refers to per ADM.

FIGURE 1

DISTRIBUTION OF PER PUPIL EXPENDITURES FOR 1977-78
169 CONNECTICUT SCHOOL DISTRICTS



Source: AFT Research Department calculations from data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

GTB Student Need Factor

In deciding what is equitable in the distribution of resources for education, Connecticut has adopted the principle of different treatment for different student needs. The student need factor, incorporated in the GTB formula reflects this principle by giving additional state aid to districts with AFDC children. In effect, the factor compensates districts for the increased costs of providing specially targeted educational services. The formula defines the student need factor as total ADM plus one half the number of AFDC children (ADM + ½ AFDC). Since this factor is an important element in the distribution of state aid, an investigation of its effect has been included.

Table 12 shows the percentage increase in the student need count as a result of adding in AFDC children for the small sample of 20 Connecticut school districts. The districts are arranged in order from those having the largest increase to those with the smallest increase. The greatest percentage increase in the sample is in Hartford, 36.4 percent, and the smallest increase is in Salem, 0.2 percent. The average increase for the sample is 6.5 percent. From looking at the table, it is clear that the districts are divided into two distinct groups. Those districts experiencing the greatest increase in student need count (Hartford, New Haven, Norwalk, Middletown, Danbury, Bristol) are the largest cities with populations in excess of 25,000, where significant numbers of families receiving AFDC benefits are to be expected. Those districts experiencing negligible increases, ranging from less than one percent to two percent, are the small cities and towns.

An analysis of all 169 Connecticut school districts shows the percentage increase in student need count over total ADM ranges from a high or 36.4 percent in Hartford to a low of 0.1 percent in Weston. Three districts, Roxbury, Scotland, and Warren show no increase in student need count due to AFDC children. The average increase for all districts is 3.4 percent.

Table 13 shows the distribution of school districts by percent increase in student need count over ADM. Almost 54 percent of all districts had less than a two percent increase in student need count over total ADM. Eighteen of the twenty-nine districts with an increase greater than 5 percent are large urban districts with populations in excess of 25,000. Thirteen of these large city districts actually had an increase in student need count ranging from 8 percent to 36 percent.

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TABLE 12

STUDENT NEED FACTOR
SAMPLE OF 20 CONNECTICUT DISTRICTS

DISTRICT	TOTAL ADM	AFDC COUNT	STUDENT NEED (ADM + ½ AFDC)	PERCENT INCREASE STUDENT NEED COUNT OVER ADM
Hartford	27,481	20,031	37,497	36.4
New Haven	20,040	13,497	26,789	33.7
Ansonia	3,024	622	3,335	10.3
Norwalk	14,293	2,472	15,529	8.6
Middletown	5,934	988	6,428	8.3
Danbury	10,562	1,460	11,292	6.9
Bristol	10,617	1,313	11,274	6.2
Groton	7,793	738	8,162	4.7
Essex	879	37	898	2.2
Chester	609	25	622	2.1
Windsor	4,953	170	5,038	1.7
Suffield	1,988	60	2,018	1.5
Wethersfield	4,811	131	4,877	1.4
Glastonbury	5,596	155	5,674	1.4
Andover	504	12	510	1.2
Bolton	796	16	804	1.0
Union	104	2	105	0.9
New Canaan	4,162	17	4,171	0.2
Wilton	4,146	15	4,154	0.2
Salem	515	2	516	0.2

Source: AFT Research Department calculations from data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

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TABLE 13

DISTRIBUTION OF PERCENT INCREASES IN
STUDENT NEED COUNT OVER ADM
169 CONNECTICUT SCHOOL DISTRICTS

% Increase in Student Need Count Over ADM	Number of Districts	Percent Of Districts
< 1.9	38	22.5
1.0-1.9	53	31.4
2.0-2.9	30	17.8
3.0-3.9	10	5.9
4.0-4.9	9	5.3
5.0-5.9	4	2.4
6.0-6.9	7	4.1
7.0-7.9	3	1.8
> 8.0	15	8.9
TOTAL	169	100.1

Source: AFT Research Department calculations from data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

Differences in District Wealth

In the previous section, we examined the differences among school districts in the distribution of educational resources. Specifically, we looked at per pupil expenditures and student need counts. In this section, we will look at differences in district wealth or the ability to raise educational revenues.

Most states define district wealth as equalized property value per pupil. Connecticut defines district wealth as a function of equalized property value and personal income. Recall that the formula for wealth, Adjusted Equalized Net Grand List Per Capita, is:

$$AENGLC = \frac{ENGL \times \frac{\text{Town Per Capita Income}}{\text{Highest Town's Per Capita Income}}}{\text{Town Population}}$$

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Table 14 shows the AENGLC for our small sample of 20 Connecticut districts, arranged in order from the wealthiest district to the poorest district. The wealthiest district in our sample is New Canaan with an AENGLC of $53,020 while the poorest district is New Haven with an AENGLC of $5,001. The range ratio for this sample is 10.6 to 1. This tells us that New Canaan is more than 10 times wealthier than New Haven. The summary data for this sample follows:

Wealthiest district: (New Canaan)	$53,020
Poorest district: (New Haven)	$ 5,001
Range:	$48,019
Range ratio:	10.6:1
Simple mean:	$13,750
Weighted mean:	$10,440
Median:	$11,046

As a quick comparison, Table 15 shows the effect of defining wealth in Connecticut on a per capita basis vs. a per ADM basis. Table 16 shows the effect on defining wealth in Connecticut as AENGLC, taking into consideration personal income vs. the traditional definition of wealth as equalized property value (ENGL) per ADM. In both tables, the 20 districts are arranged in order from the wealthiest to the poorest district by AENGLC. The value of the alternative wealth measures are given in the second column. The third column represents the new ranking of districts by wealth using the alternative measure. As you can see by the tables, the definition of wealth plays an important role in determining the relative wealth of a district and therefore its relative need for state aid.

For a more accurate reflection of district wealth across the state, we will again refer to data for all 169 Connecticut school districts. Summary measures for the 169 districts follow:

Wealthiest district: (New Canaan)	$53,020
Poorest district: (Waterbury)	$ 4,453
Range:	$48,567
Range ratio:	11.9:1
Simple mean:	$12,756
Weighted mean:	$11,881
Median: (Shelton)	$10,403

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TABLE 14

ADJUSTED EQUALIZED NET GRAND LIST PER CAPITA
SAMPLE OF 20 CONNECTICUT DISTRICTS

DISTRICT	AENGL[1]	1975 POPULATION	AENGLC
New Canaan	$ 949,157,712	17,902	$53,020
Wilton	570,038,690	14,830	38,438
Essex	95,335,286	5,166	18,454
Norwalk	1,092,136,800	76,688	14,241
Glastonbury	304,055,860	23,549	12,912
Danbury	681,757,931	54,512	12,507
Wethersfield	332,249,225	27,281	12,179
Windsor	287,509,867	24,932	11,352
Suffield	104,032,631	9,311	11,173
Union	5,708,328	511	11,171
Salem	19,068,507	1,746	10,921
Middletown	425,443,936	39,694	10,718
Andover	19,441,325	2,100	9,258
Bolton	36,587,286	4,161	8,793
Chester	27,633,218	3,283	8,417
Groton	318,642,776	39,764	8,013
Bristol	298,997,279	58,560	6,813
Ansonia	121,859,894	20,461	5,956
Hartford	783,653,970	138,152	5,672
New Haven	634,292,945	126,845	5,001
TOTAL	7,197,603,466	689,448	

[1] AENGL computed using figures for ENGL and town population taken from Equity and Excellence in Education, Connecticut State Board of Education, 1977, pp. 31-36.

Source: AFT Research Department calculations based on data from Equity and Excellence in Education, Connecticut State Board of Education, 1979, pp. 31-36.

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TABLE 15

CONNECTICUT AENGLC VS. AENGL PER ADM
SAMPLE OF 20 CONNECTICUT DISTRICTS

DISTRICT	AENGLC	AENGL PER ADM	RANK BY AENGL PER ADM
New Canaan	$53,020	$228,053	1
Wilton	38,438	137,491	2
Essex	18,454	108,459	3
Norwalk	14,241	76,411	4
Glastonbury	12,912	54,334	10
Danbury	12,507	64,548	7
Wethersfield	12,179	69,060	6
Windsor	11,352	58,048	8
Suffield	11,173	52,481	11
Union	11,171	54,888	9
Salem	10,921	37,026	18
Middletown	10,718	71,696	5
Andover	9,258	38,574	16
Bolton	8,793	45,964	12
Chester	8,417	45,375	13
Groton	8,013	40,888	14
Bristol	6,813	37,581	17
Ansonia	5,956	40,298	15
Hartford	5,672	28,516	20
New Haven		31,651	19

Source: AFT Research Department calculations based on data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

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TABLE 16

CONNECTICUT AENGLC VS. ENGL PER ADM
SAMPLE OF 20 CONNECTICUT DISTRICTS

DISTRICT	AENGLC	ENGL PER ADM	RANK BY ENGL PER ADM
New Canaan	$53,020	$237,205	1
Wilton	38,438	178,725	4
Essex	18,454	197,645	2
Norwalk	14,241	151,915	5
Glastonbury	12,912	99,395	14
Danbury	12,507	143,463	6
Wethersfield	12,179	127,231	8
Windsor	11,352	120,710	9
Suffield	11,173	110,432	11
Union	11,171	141,200	7
Salem	10,921	81,926	18
Middletown	10,718	181,050	3
Andover	9,258	76,704	20
Bolton	8,793	94,582	15
Chester	8,417	116,047	10
Groton	8,013	100,212	13
Bristol	6,813	90,588	16
Ansonia	5,956	100,603	12
Hartford	5,672	87,361	19
New Haven	5,001	84,990	17

Source: AFT Research Department calculations based on data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

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Table 17 and Figure 2 show the distribution of AENGLC across all school districts. Keeping in mind the values of the simple mean, weighted mean, and median, about 25% of the districts fall within the range of central tendency, the $10,000-$14,000 wealth range; 47.9 percent of the districts fall below the average wealth range; and 27.2 percent lie above the range.

Another way to look at the differences in district wealth is to rank the districts by deciles in order of size. Deciles divide a distribution into 10 subdivisions, with each subdivision having an approximately equal number of districts. Within our sample, each subdivision will have 17 districts with the exception of the highest decile. This will have 16 districts. Table 18 shows the distribution of district AENGLC by deciles.

Again, this table shows a wide difference among districts in wealth, AENGLC. If we eliminate the extreme values and consider only the values at the 90th percentile ($24,001) and the 10th percentile ($5,505) we find the range to be considerably smaller. Our new range is 4.4 to 1 as compared to 11.9 to 1 (for all 169 districts). The simple mean and weighted mean ($12,756/$11,881) both fall within the seventh percentile.

TABLE 17

DISTRIBUTION OF AENGLC
169 CONNECTICUT DISTRICTS

AENGLC ($)	NUMBER OF DISTRICTS	PERCENT OF DISTRICTS
4,000- 6,000	24	14.2
6,001- 8,000	36	21.3
8,001-10,000	21	12.4
10,001-12,000	30	17.8
12,001-14,000	12	7.1
14,001-16,000	11	6.5
16,001-18,000	4	2.4
18,001-20,000	10	5.9
> 20,000	21	12.4
TOTAL	169	100.0

Source: AFT Research Department calculations from data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

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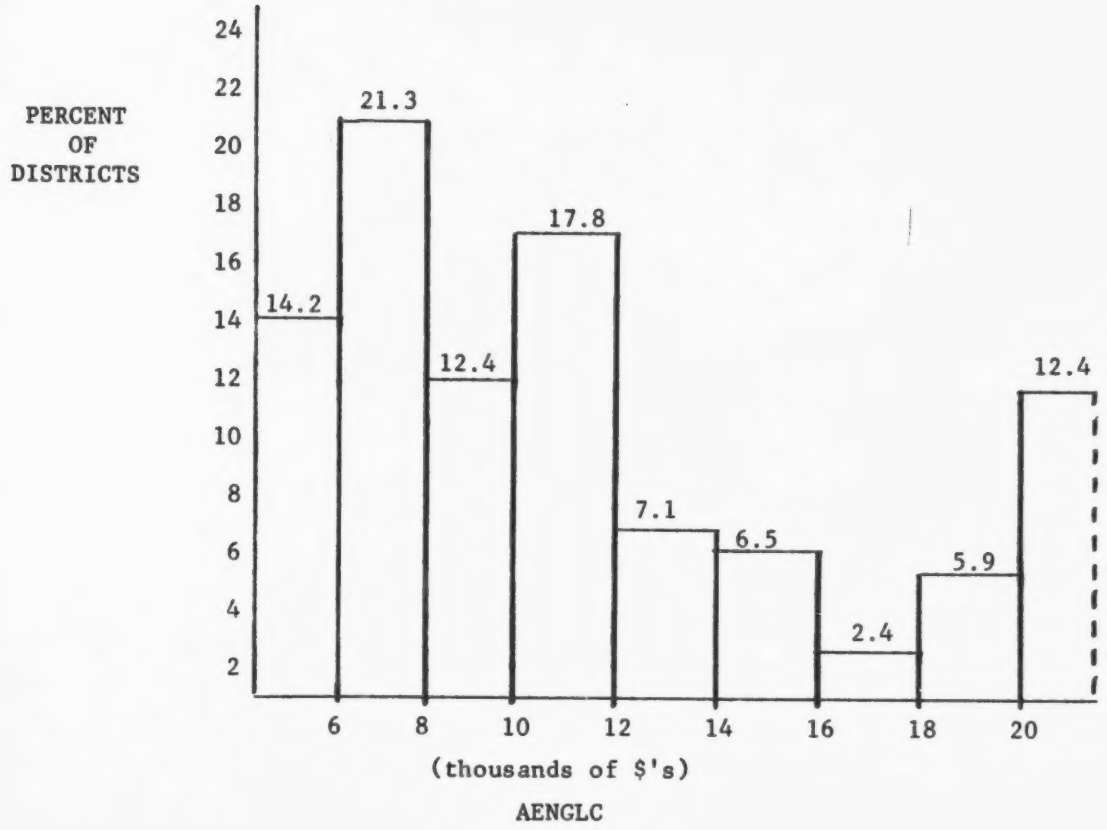
FIGURE 2

DISTRIBUTION OF AENGLC
169 CONNECTICUT DISTRICTS



Source: AFT Research Department calculations based on data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

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TABLE 18

AVERAGE AENGLC BY DECILES
169 CONNECTICUT DISTRICTS

DECILE	MAXIMUM VALUE	MINIMUM VALUE	MEAN VALUE
10	53,020	24,958	35,265
9	24,001	16,535	19,967
8	16,078	13,757	14,867
7	13,630	11,250	11,619
6	11,196	10,588	10,939
5	10,403	8,417	9,455
4	8,356	7,678	7,974
3	7,631	6,508	7,050
2	6,426	5,672	6,042
1	5,505	4,453	5,114

Source: AFT Research Department calculations based on data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

Differences in Tax Effort

Under the Connecticut GTB formula, the level of educational spending within a district is directly dependent upon local effort or willingness to pay. Since each district is effectively guaranteed the same tax base, through state aid, the amount of revenue a district raises for education depends on the school tax rate it levies. In this section, we will examine the differences in school tax effort. Keep in mind that while the Connecticut state aid formula takes into consideration personal income, it is still difficult for low wealth or low income districts to levy high school tax rates. Even though by levying a high tax rate, a low income district receives more state aid thereby increasing its revenues, that high tax rate still represents a greater burden for the low income district than for the higher income district.

Table 19 shows the school tax rate for our small sample of 20 Connecticut school districts. The districts are arranged in order from the district with the highest tax rate to the lowest tax rate. The highest district in this

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TABLE 19

SCHOOL TAX RATES FOR 1979 GTB FORMULA
SAMPLE OF 20 CONNECTICUT DISTRICTS

DISTRICT	SCHOOL TAX RATE (MILLS)
Hartford	47.67
Andover	32.77
New Haven	32.67
Chester	31.27
Groton	29.32
Bolton	28.12
Salem	27.64
Bristol	26.58
Suffield	25.83
Ansonia	24.44
Windsor	23.31
Glastonbury	21.58
Wethersfield	21.36
Danbury	19.80
Middletown	18.15
Norwalk	17.56
Union	17.13
Wilton	12.61
Essex	12.58
New Canaan	8.67

Source: AFT Research Department calculations based on data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

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sample, Hartford, has a tax rate of 47.67 mills (a mill is a tax rate of $1.00 per $1,000 of property value). The lowest district in the sample, New Canaan, has a tax rate of 8.67 mills. The simple mean for this sample is 23.95 mills and the median is 23.88 mills.

Table 20 shows the distribution of school tax rates for all 169 Connecticut school districts. The summary measures for the school tax rate data follows:

Highest tax rate (Eastford)	49.91
Lowest tax rate (Greenwich)	6.95
Range	43.26
Range ratio	7.5:1
Mean	24.71
Median	25.05

You can see from the summary measures and Table 20 that there is a wide variance among districts in tax effort. Twenty percent of the districts fall within the interval for the mean and median values. Nearly thirty percent tax below the mean level. Figure 3 shows this distribution graphically.

TABLE 20

DISTRIBUTION OF SCHOOL TAX RATES
169 CONNECTICUT DISTRICTS

SCHOOL TAX RATE (mills)	NUMBER OF DISTRICTS	PERCENT OF DISTRICTS
Under 10.00	7	4.1
10.00-15.00	22	13.0
15.01-20.00	21	12.4
20.01-25.00	34	20.1
25.01-30.00	39	23.1
30.01-35.00	24	14.2
35.01-40.00	16	9.5
Above 40.00	6	3.6
TOTAL	169	100.0

Source: AFT Research Department calculations based on data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

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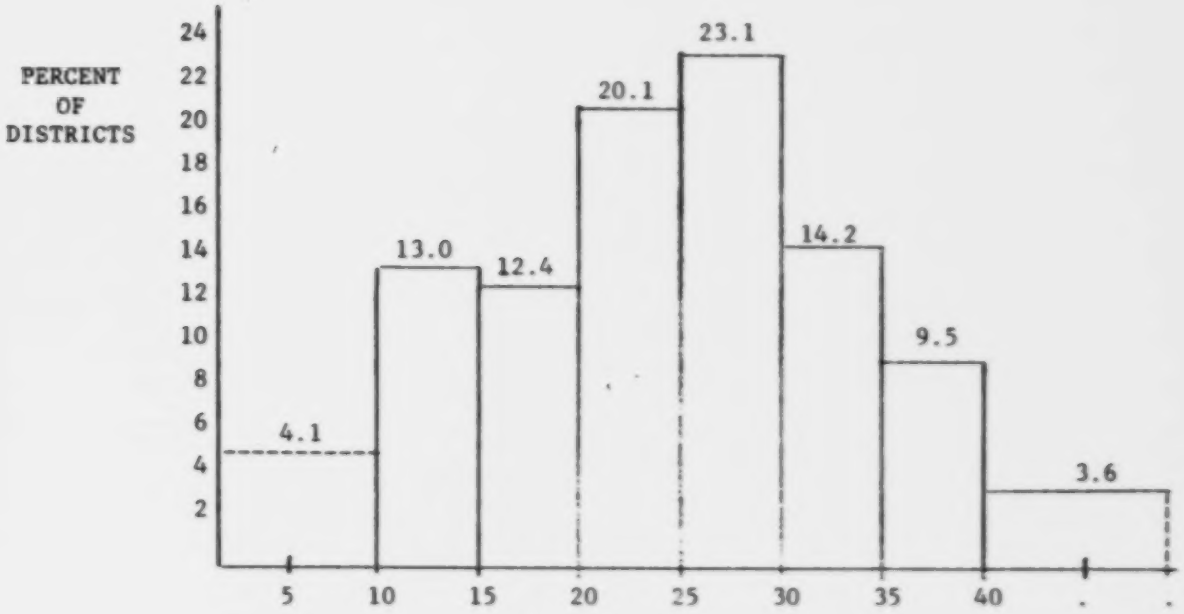
FIGURE 3

DISTRIBUTION OF SCHOOL TAX RATES
169 CONNECTICUT DISTRICTS



Source: AFT Research Department caluclations based on data from Equity and Excellence in Education, 1979; Connecticut State Department of Education.

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Comparing Wealth with Educational Services

The preceding sections examined the differences among school districts in educational expenditures per ADM, student need counts, AENGLC, and school tax rates. This section will compare some of these differences to determine if there are any relationships suggested between district wealth or ability to raise revenues, and the level of educational services provided.

Table 21 shows the distributions of measures of district wealth versus measures of educational spending. In looking at this table, it is difficult to determine if any definite patterns are emerging from the data. To help summarize the data so that it may be more easily analyzed, we have drawn upon a technique introduced earlier in the section on Difference in District Wealth. The data in Table 21 has been grouped by quintiles, each quintile containing 4 values. Quintiles, rather than deciles, were chosen because of the smallness of the sample. For each of the categories within a quintile, the mean value has been computed.

Table 22 shows the Summary of Measures of Ability to Pay versus Educational Expenditures and State Aid. Some definite patterns do emerge from this table. Across the 20 districts, per ADM expenditures generally increase as AENGLC increases. This pattern is interrupted in the 3rd quintile which has a lower per ADM expenditure than expected. This kind of inconsistency does occur in small sample data.

Mean school tax rates vary inversely as district wealth, AENGLC, increases. This means as district wealth increases, school tax rates decrease. This pattern follows the general expectation that poorer districts must often tax themselves at substantially higher rates than wealthy districts to raise a reasonable level of revenue. When these figures are compared with the per ADM expenditures, we find that while poorer districts are willing to tax themselves at relatively high rates they are still unable to raise sufficient revenues to provide a per ADM expenditure comparable to that of a wealthier district.

Per ADM GTB grants also vary inversely as district wealth increases. For state aid to be equalized, this general pattern should be evident.

Table 23 shows a similar distribution of Summary Measures of Ability to Pay versus Educational Expenditures and State Aid for our larger sample of all 169 Connecticut school districts. In this table, the data has been grouped by deciles (10 groups). Each decile represents 17 district values with the exception

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TABLE 21

COMPARISON OF DISTRICT WEALTH, EXPENDITURES,
TAX RATE, STATE AID
SAMPLE OF 20 CONNECTICUT DISTRICTS

DISTRICT	AENGLC	PER ADM EXPENDITURES	SCHOOL TAX RATE	PER ADM GTB AID (FULLY IMPLEMENTED)
New Canaan	53,020	2,284	8.67	250
Wilton	38,438	2,038	12.61	250
Essex	18,454	1,736	12.58	250
Norwalk	14,241	1,877	17.56	323
Glastonbury	12,912	1,552	21.58	403
Danbury	12,507	1,788	19.80	399
Wethersfield	12,179	1,897	21.36	415
Windsor	11,352	1,713	23.31	469
Suffield	11,173	1,733	25.83	529
Union	11,171	1,147	17.13	349
Salem	10,921	1,233	27.64	565
Middletown	10,718	1,669	18.15	405
Andover	9,258	1,671	32.77	732
Bolton	8,793	1,695	28.12	640
Chester	8,417	1,797	31.27	731
Groton	8,013	1,663	29.32	716
Bristol	6,813	1,464	26.58	692
Ansonia	5,956	1,424	24.44	684
Hartford	5,672	2,100	47.67	1,669
New Haven	5,001	1,802	32.67	1,150

Source: AFT Research Department calculations based on data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

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TABLE 22

SUMMARY MEASURES OF ABILITY TO
PAY VERSUS EDUCATIONAL EXPENDITURES
AND STATE AID
SAMPLE OF 20 CONNECTICUT DISTRICTS

QUINTILE	MEAN AENGLC	MEAN PER ADM EXPENDITURES	MEAN SCHOOL TAX RATE	MEAN PER ADM GTB GRANT (FULLY IMPLEMENTED)
1	$31,038	$1,984	12.86	$ 268
2	12,238	1,738	21.51	422
3	10,996	1,446	22.19	462
4	8,620	1,707	30.37	705
5	5,861	1,697	32.84	1,049

TABLE 23

SUMMARY MEASURES OF ABILITY TO PAY
VERSUS EDUCATIONAL EXPENDITURES AND STATE AID
169 CONNECTICUT DISTRICTS

DECILE	MEAN AENGLC	MEAN PER ADM EXPENDITURES	MEAN SCHOOL TAX RATE	MEAN PER ADM GTB GRANT (FULLY IMPLEMENTED)
10	$35,265	$1,971	10.62	$256
9	19,967	1,785	14.13	259
8	14,867	1,622	19.70	334
7	11,619	1,612	21.17	426
6	10,939	1,547	24.56	514
5	9,455	1,512	26.97	605
4	7,974	1,466	30.86	740
3	7,050	1,349	29.86	749
2	6,042	1,364	33.19	949
1	5,114	1,417	34.07	982

Source: AFT Research Department calculations based on data from Equity and Excellence in Education, 1979; Connecticut State Board of Education.

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of the 10th decile which represents 16 district values.

In this table, we see the same basic patterns emerging as in the smaller sample. Across all districts, per ADM expenditures increase directly as AENGLC increases. The mean per ADM expenditure in the highest decile is 1.4 times the mean per pupil expenditure in the lowest decile.

Again mean school tax rates for each decile vary inversely as AENGLC increases. This pattern shows the poorer districts taxing themselves at rates substantially higher than those for wealthy districts. The mean tax rate in the first decile is 3 times the school tax rate in the tenth decile. Despite the substantially higher tax rates, the poorer districts are still unable to generate a level of educational spending comparable to that of the wealthy districts.

Keep in mind, as we make these comparisons that the per ADM expenditures and school tax rates reflect data which are two years old. (Figures for net current local educational expenditures are taken for two years prior to the grant year). As the new Connecticut GTB formula takes effect, we might expect to see some equalizing of school tax rates. Since all districts will be guaranteed a relatively high tax base (equal to that of the 9th wealthiest district), it will no longer be necessary for poorer districts to levy high tax rates to compensate for their low wealth base. Rather tax rates should more closely reflect the desire of districts to offer a given level of educational services.

Finally, state aid varies inversely as AENGLC increases. This is to be expected. As the GTB formula is designed to achieve equity in the raising of educational revenues, state aid should be distributed in a manner such that poorer districts receive greater amounts of aid. You can see from the table that districts in the first decile receive almost 4 times (3.8) the amount of state aid as do districts in the tenth decile. In fact, districts in the ninth and tenth decile receive on the average only a little more state aid than is guaranteed to them by the $250 save-harmless provision (to be phased out in the future).

A cautionary note, while the data presented in these tables illustrate considerable differences among districts in local capacity to support education and in educational spending, the tables are not meant to imply that the new Connecticut GTB formula is ineffective. Rather this chapter has been presented to aid the student of public policy in understanding how a school finance policy might be analyzed. Indeed, while the data presented in these tables represent the figures (as of July 1979) that will be used in the formula for calculating state aid for

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1979-80, the data is from the first year of implementation of the new formula. Since full funding of the new formula is not scheduled until 1984, the true equalizing effect of the GTB formula cannot be accurately considered until some time after 1984. If any conclusion is drawn from the tables in this chapter, it would be that there is data support for developing the new GTB formula. For any long term policy recommendations it is suggested that analyses, similar to the one presented in this chapter be undertaken several years hence and even later after full funding of the program.

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APPENDIX A

FORMULA ENTITLEMENTS PRIOR TO FULL FUNDING

Full funding for the Guaranteed Tax Base Formula is to be phased in over a five-year basis, beginning July 1, 1979. The Connecticut law (P.A. 79-128) specifies that the state will appropriate 56% of the full costs of funding the GTB formula in fiscal year 1980 (FY 80); 67% of full funding in FY 81; 78% in FY 82; 89% in FY 83; and 100% of costs on full funding in FY 84 and every year thereafter.

During the phase-in period, equalizing state aid will be distributed to towns based on a percentage of the difference between a town's current state general aid and its full funding entitlement for the grant year. As an example, state aid per pupil for FY 80 (pupil = ADM) will equal FY 79 state aid per pupil plus or minus a percentage of the difference between FY 79 state aid per pupil and the full entitlement for FY 80 state aid per pupil.

$$\text{FY 80 Actual Aid Per Pupil} = \text{FY 79 Aid Per Pupil} + N\% \,(\text{FY 80 Aid Per Pupil} - \text{FY 79 Aid Per Pupil})$$

The percentage of the difference, N%, is determined by dividing the difference between the total appropriation for general state aid for FY 80 and the total appropriation for general state aid for FY 79 by the difference between full funding for FY 80 and the total appropriation for general state aid for FY 79.

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APPENDIX B

ANSWERS TO EXERCISES

Exercises on AENGLC

1. Canterbury

$$AENGLC = \frac{56,603,052}{3,174} = \frac{4,323}{11,404}$$

$$= 17,833 \times 0.379$$

$$= \$6,759$$

2. Goshen

$$AENGLC = \frac{67,665,912}{1,637} = \frac{5,260}{11,404}$$

$$= 41,335 \times 0.461$$

$$= \$19,055$$

3. Roxbury

$$AENGLC = \frac{70,171,448}{1,368} = \frac{8,010}{11,404}$$

$$= 51,295 \times 0.702$$

$$= \$36,009$$

Exercises on GTB Grant

1. GTB Aid = (30,000 - 15,000) X 0.020 X 175

= $52,500

. Aid Per Pupil = $\frac{52,500}{150}$ = $350

2. GTB Aid = (30,000 - 10,000) X 0.030 X 175

= $105,000

= $700 per pupil

3. GTB Aid = (30,000 - 10,000) X .020 X 171

= $68,400

= $468 per pupil

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Exercises on GTB Formula

1. Norwalk

Student Need = 14,293 + ½ (2,472)
= 14,239 + 1236
= 15,529

GTB Aid = (31,334 - 14,241) X .01756 X 15,529
= 17,093 X .01756 X 15,529
= $4,661,077

GTB Aid/Pupil = $\frac{\$4,661,077}{14,293}$
= $326

2. Hartford

Student Need = 27,481 + ½ (20,031)
= 37,497

GTB Aid = (31,334 - 5,672) X .04767 X 37,497
= 25,662 X .04767 X 27,497
= $45,870,363

Aid/Pupil = $\frac{\$45,870,363}{28,481}$
= $1,669

3. Darien

GTB Aid = 4,739 X 250 (Save Harmless)
= $1,184,750

Aid/Pupil = $250

4. Salem

GTB Aid = (31,334 - 10,921) X .02764 X 516
= 20,413 X .02764 X 516
= $291,135

Aid/Pupil = $565

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